

DIVISION 38

DOORS, FRAMES AND MISCELLANEOUS METAL

38.01 SCOPE: The work in this section includes the furnishing of all labor, materials, equipment and other incidentals for construction of the door, stairs, ladders, handrails, hatches, gratings and other miscellaneous metal items in accordance with the Contract Documents and BOCA Code.

38.01 MATERIALS:

Doors and Frames:

- A. Doors shall be standard metal, full flush doors with metal frames. Southside doors shall be similar to “Medallion” type (1 $\frac{3}{4}$ ” thick), as manufactured by the Ceco Corporation. Doors shall be recessed and reinforced in accordance with applicable industry standards to receive hardware as specified.
- B. Hardware: Hinges shall be two ball-bearing type steel hinges, Ceco #2112-USP. All outside doors shall be equipped with a heavy duty, cylindrical lockset. The door lock shall be a utility type; turnkey to open from outside; deadlocked when closed, cannot be left unlocked; turn-knob to open from inside, emergency exit safety requirements. Lock is to be master keyed for City Master Key No. D99699. Russwin Type 452, or any approved equal lock, unlocked by City Master Key. Contractor shall provide three (3) keys to the City.
- C. Door Frames shall have a 2” face and a 5 $\frac{3}{4}$ ” depth unless otherwise shown on the plans. Frames shall be recessed and reinforced to receive hardware, as specified. Frames shall be furnished with the necessary anchors and shall be prime painted.
- D. Thresholds and Weather-stripping: Doors shall be equipped with weather-stripping and interlocking threshold. The threshold shall be Ceco #4221 aluminum.

Miscellaneous Metals

- A. Structural Steel: Structural steel shall conform to the requirements of ASTM A36 and AISC. All steel shapes shall be fitted with clips, anchors, and base and angle plates as require for bolting, welding or anchoring into the concrete structure and masonry walls. The bolting, welding and anchorage shall be adequate to provide for the imposed loads as indicated on the drawings.

- B. Lintels: Furnish and install structural steel lintels over all openings of the type and sizes as indicated on the plans.
- C. Shop Drawings: Shop drawing submittal is required for all items under this division except lintels. Suppliers of ladders and stairs shall furnish certification that their design complies with all OSHA requirements.
- D. Railing: Pipe railings shall be installed at locations as shown on plans. Pipe railings shall be 1½ I.D. flush fittings, welded type ground smooth, standard weight steel pipe. Complete assembly to be hot dipped galvanized after fabrication for wet well railing. Railing stanchions shall be spaced not more than 6 feet apart. Stanchions to be secured to concrete as shown on plans. Rails shall be continuous through intermediate posts and standard handrail fittings shall be used throughout for screwed or welded connections. Railing shall be set in sleeves in floor and bolted to masonry walls.
- E. Spiral Stairway: Where plans call for spiral stairway, Duvinage Series 300 with open raisers and checkered treads, or approved equal, shall be used.
- F. Ladders:
1. Wet Well Ladders shall be 18” wide and shall have 2½” x 3/8” steel siderails and ¾” diameter rods for treads. Ladder to be bolted to wall with angle clips. Ladders to be hot dipped galvanized after assembling.
 2. Pump Room Ships Ladder shall be 2 feet wide and shall have 6” x ¼” steel siderails and 6” x ¼” checkered treads. Handrails shall be 1¼” diameter and welded to siderails. Ladder to be anchored in place with angle clips and bolts.
- G. Grating shall be extruded galvanized steel of the sizes shown on the plans. Grating shall be “I-Bar” as manufactured by Irving Grating and shall be furnished with perimeter bars. Grating shall be capable of supporting a live load of 150 pounds per square foot.
- H. Entrance Hatches shall be Richards Foundry or equal, with design numbers as indicated on the drawings.
- I. Galvanizing shall be in accordance with Section 415 of VDOT Road and Bridge Specifications.

38.03 SUBMITTALS: (Doors and Frames) Shop drawings shall be submitted for all items provided under this division.

38.04 EXECUTION: (Doors and Frames) Doors shall be installed plumb, square and level. Door frames shall be securely anchored in place with joints fully caulked. Doors shall be adequately protected from damage during construction. All coatings, protective covering materials, etc., shall be removed after construction, doors and door frames cleaned and painted as specified under "Painting".

38.05 MEASUREMENT AND PAYMENT: Payment will be included in the lump sum bid price for the pumping station.